Message

From: Wirick, Holiday [wirick.holiday@epa.gov]
Sent: 8/11/2021 4:56:26 PM
To: Wax, Peter N. [pwax@nd.gov]
Subject: Re: A couple of quick questions

Hi Pete, for 1., I'm familiar with ND's WQS approval "process," but I'm trying to figure which entity to cite as the "approving" agency. Is it DEQ? Which just has to get the nods from the powers-that-be described below?

Excellent on 2 and 3.

Thanks!

From: Wax, Peter N. <pwax@nd.gov>
Sent: Wednesday, August 11, 2021 10:43 AM
To: Wirick, Holiday <wirick.holiday@epa.gov>
Subject: RE: A couple of quick questions

Dear Holly:

The responses are in blue. I am in all this and next week.

1. What entity approves ND's WQS?

State process. One: prepare public notice(s), two: prepare a regulatory analysis, takings assessment, small entity analysis, small entity economic impact, and fiscal note, three: present to Environmental Advisory Board (officially they do not approve or disapprove but we do as they wish), four: hold public hearing, five: respond to oral and written comments, six: present to Attorney General for legal opinion, seven: file with the legislative Council and present to the Legislative Rules Committee (the big hurdle).

2. For the hardness-dependent criteria example revisions, only the examples in Table 2 (p. 16) are changing, correct? Not the actual criteria values?

No change to the standard just the example based on 100mg/l to 400 mg/L to give a more accurate idea at a glance.

3. Also, more out of curiosity but also for my response to OW re Q2, can you please briefly explain why the example values in Table 2 are higher those calculated using the EPA metals criteria calculator (attached)? Were pH values different or were they converted from dissolved?

The criteria are actually identical. The ones in the table below are expressed as dissolved and ours are expressed as total recoverable. The conversion used is supplied by EPA https://www3.epa.gov/npdes/pubs/metals_translator.pdf

CMC (dissolved) = exp{mA [ln (hardness)]+ bA} (CF)
CCC (dissolved) = exp{mC [ln (hardness)]+ bC} (CF)

Parameter		mA	bA	mC	bC	Freshwater Conversion Factors (CF)		Example criteria magnitudes (assuming hardness of 100) - adjust box B4 if different		
						CMC	CCC	CMC	CCC	
Cadmium	Cd	0.9789	-3.866	0.7977	-3.909	0.886	0.851	6.54046	2.032059	Cd has Equation based CFs (embedded): CMC 1.136672-[(lnhardness)(0.041838)], CCC 1.101672-
Chromium (III)		0.819	3.7256	0.819	0.6848	0.316	0.86	1773.298	230.6696	
Lead	Pb	1.273	-1.46	1.273	-4.705	0.589	0.589	280.8465	10.94318	Pb has Equation based CFs (embedded): CMC 1.46203-[(lnhardness)(0.145712)], CCC 1.46203-[(l
Nickel	Ni	0.846	2.255	0.846	0.0584	0.998	0.997	1512.89	168.0354	
Silver	Ag	1.72	-6.59	---	---	0.85	---	34.51093	---	
Zinc	Zn	0.8473	0.884	0.8473	0.884	0.978	0.986	379.298	382.4087	
Pentachlorophenol		1.005	-4.869	1.005	-5.134	1	1	8.723321	6.692584	*Note: This is not a metal.*

Conversion factors are to convert between totals (for permitting, etc) and dissolved (criteria expression)
Saltwater aren't hardness-based. They still include conversion factors b/c permits and other activities are based on TOTAL concentrations, but criteria are based on DISSOLVED.

Pete

From: Wirick, Holiday <wirick.holiday@epa.gov>
Sent: Wednesday, August 11, 2021 10:59 AM
To: Wax, Peter N. <pwax@nd.gov>
Subject: A couple of quick questions

Thanks,
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